



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,583	12/08/2003	Baoliang Wang	1074-057	2093
21034	7590	10/29/2004	EXAMINER	
IPSOLON LLP 805 SW BROADWAY, #2740 PORTLAND, OR 97205			STAFIRA, MICHAEL PATRICK	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/730,583

Applicant(s)

WANG, BAOLIANG

Examiner

Michael P. Stafira

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on election made on 8/26/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 24-30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☒ Claim(s) 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/26/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 24-30 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected II and III, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 26, 2004. Since applicant did not indicate the election was with traverse or without traverse examiner is going to assume the election is without traverse.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

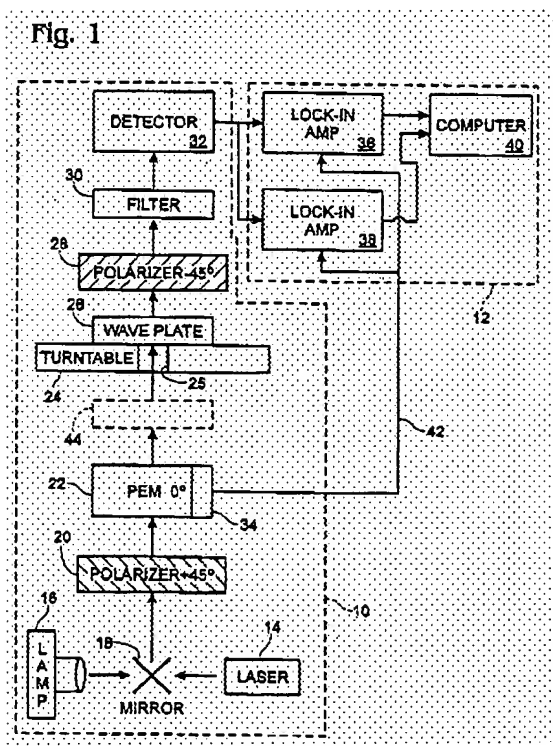
3. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Oakberg ('181).

Art Unit: 2877

**Claim 19**

Oakberg ('181) discloses a source of two or more beams (Fig. 1, Ref. 14, 16) of light having wavelengths that are different from one another (Col. 1, lines 60-67); means for modulating the polarization of the light beams (Fig. 1, Ref. 34); means for separately directing the beams through the sample (Fig. 1, Ref. 18); means for analyzing (Fig. 1, Ref. 28) the beams after the beams pass through the sample (Fig. 1, Ref. 26); and detection means (Fig. 1, Ref. 32) for detecting the intensity of the beams, thereby to provide information suitable for calculating a birefringence property of the sample based on the detected intensities (Col. 4, lines 8-35).

Fig. 1

**Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2877

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oakberg ('181).

**Claim 20**

Oakberg ('181) discloses the claimed invention except for the means for separately directing includes a deuterium lamp and a monochromator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Oakberg ('181) with the deuterium lamp and monochromator since it was well known in the art that that using these types of sources produce well defined wavelengths, therefore increasing the accuracy of the measurement.

**Claim 21**

Oakberg ('181) discloses the claimed invention except for the sample is calcium fluoride with a thickness of up to about 270 millimeters. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Oakberg ('181) with the calcium fluoride up to 270 millimeters thick since it was well known in the art that using know optical samples allows the apparatus to be configured to that material, therefore increasing the sensitivity of the apparatus.

**Claim 22**

Oakberg ('181) discloses the claimed invention except for the wavelengths of the light source is about 157 nanometers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Oakberg ('181) with the 157 nanometer

Art Unit: 2877

wavelength since it was well known in the art that tuning an apparatus wavelength to the peak efficiency of the sample increases the sensitivity, therefore increasing the accuracy of the measurement.

**Claim 23**

Oakberg ('181) discloses the claimed invention except for modulating the light beams with a pair of photoelastic modulators. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Oakberg ('181) with a pair of photoelastic modulators since it was well known in the art that using multiple optical modulating devices decreases the interference between multiple light beams, therefore increasing the accuracy of the measurement.

***Allowable Subject Matter***

6. Claims 1-18 are allowed over the prior art of record.
7. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art fails to disclose or make obvious a method of determining a birefringence property of a sample having the step of separately directing through the sample a first beam of polarization-modulated light having a first wavelength and a second beam of polarization-modulated light having a second wavelength, the first and second wavelengths being different and modulating the polarization of the first and second beams after those beams pass through the sample, and in combination with the other recited limitations of claim 1. Claims 2-15, 17, 18 are allowed by the virtue of dependency on the allowed claim 1.

Regarding claim 16, the prior art fails to disclose or make obvious a method of measuring birefringence properties of a sample having the step of separately directing through the sample at least three light beams comprising a first beam of polarization-modulated light having a first wavelength, a second beam of polarization-modulated light having a second wavelength, and a third beam of polarization-modulated light having a third wavelength, the first, second, and third wavelengths being different from one another, and modulating the polarization of the first, second, and third beams after those beams pass through the sample, and in combination with the other recited limitations of claim 16.

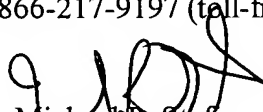
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Stafira  
Primary Examiner  
Art Unit 2877

October 20, 2004